E P4 A search for vertical structure of magnetic field in the CP star α^2 CVn

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We observed magnetic field of the CP star α^2 CVn at the 6-m telescope with the echelle-spectrometer (spectral resolution R = 50000, spectral range 3400 - 4100 ÅÅ) using a CCD device and Zeeman analyzer. We found that at all phases of the rotational period the longitudinal magnetic field, B_e, is systematically weaker, by 25%, when measured from lines with wavelength shorter of the Balmer jump (3646 Å), than when measured from lines with wavelengts > 3646 Å.

As in general, the lines with $\lambda > 3646$Å form deeper than those with $\lambda < 3646$ Å, we got an additional evidence for increasing of B_e with depth in the atmosphere of α^2 CVn.